SCHNICK
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SYSTEMS

USER MANUAL
LED POWER SUPPLY 4

Version 1.7 Mk2

english

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1.0 Overview

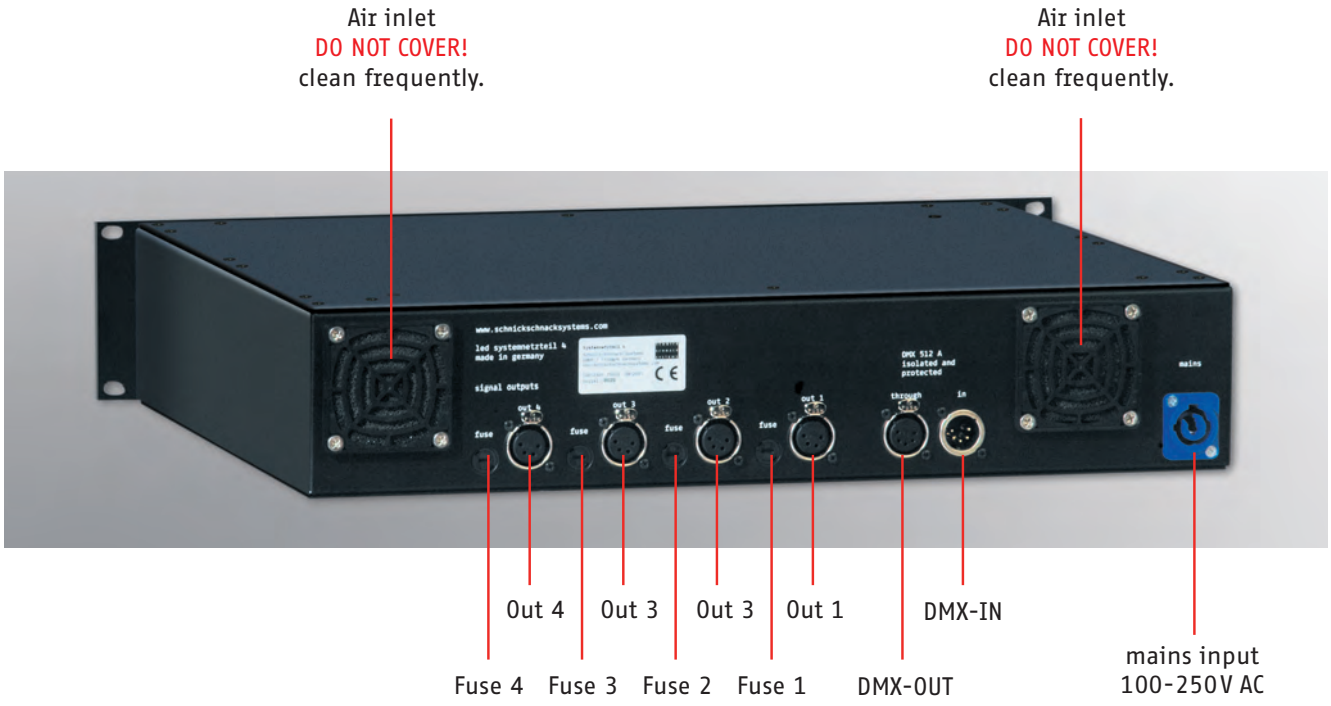
The LED-Systemnetzteil 4 is the power and data supply for the RGB LED Kachel B and the RGB LED Streifen B. The Systemnetzteil 4 features 4 independent outputs with XLR 4 pin Connectors. Each output supports up to 20 Kachel B or up to 8 meter LED-Streifen B25-250 or up to 4 meter LED Streifen B12-250.

To connect the LED-Streifen you need Intelligences to convert the control signal into LED dimming.

Each output can be independently adressed. The unit is able to control the connected LED-fixtures even if there is no DMX signal.

2.0 Connectivity

You find the following connections on the back panel of the unit:



DMX input and output:	Neutrik XLR 5-pin
LED output 1-4:	Neutrik XLR 4-pin
Mains input:	Neutrik Powercon 100-250V AC

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3.0 Setup

Before connecting the unit to power make sure that the unit has not suffered any damages during transport. A damaged unit must not be connected to power.

If the Systemnetzteil 4 was transported from a cold enviroment into a warmer place make sure to let it warm up for at least 3 hours to allow condensing water to vaporate and to prevent risks to the electronics.

If the unit is rack mounted make sure that there is a sufficent supply of air on the back side as well as free air circulation on the front. The temperature of the surrounding air should not exceed 35° C/95° F. When installing the Systemnetzteil 4 into a rack we recommend the use of mounting tracks to relieve the front plate from mechanical load and to make servicing more easy.

Connect the DMX input (and if necessary the DMX output) as well as the LED outputs you are going to use.

Switch on the Systemnetzteil 4 by twist-locking the powercon connector or activating the power supply. There is no Main switch on the unit. It will take about 1 second for the unit to be operative.

Do not operate the unit in direct sunlight. Do not clean the Systemnetzteil 4 with aggressive solvents or water. A moist towel will be sufficent in most times. If necessary you might use a mild cleaner on the towel.

4.0 System Wiring

The Systemnetzteil 4 can be set up fexibly.
LED fixtures connect from one to another with 4-pin-PCB-connectors. These connectors are small, lightweight and inexpensive and ideal for the internal wiring. Longer cable runs make use of the more durable XLR 4pin cables which have 2 wires for current and a shielded pair of data wires. These cables are commonly used for colour changer systems. The interface from the XLR-cable to the PCB-cable is the „Adapterplatine“ a little PCB that features a XLR 4pin input, a XLR 4pin output and two sets of PCB-cable inputs and outputs.
If you place the „Adapterplatine“ on the outside of a decoration element with LEDs inside you connect the elemnet to the Systemnetzteil 4 with the XLR 4pin cable and do the wiring inside the element with PCB-cables. The following table shows all possible combinations and the maximum number of LED fixtures:

Per output:

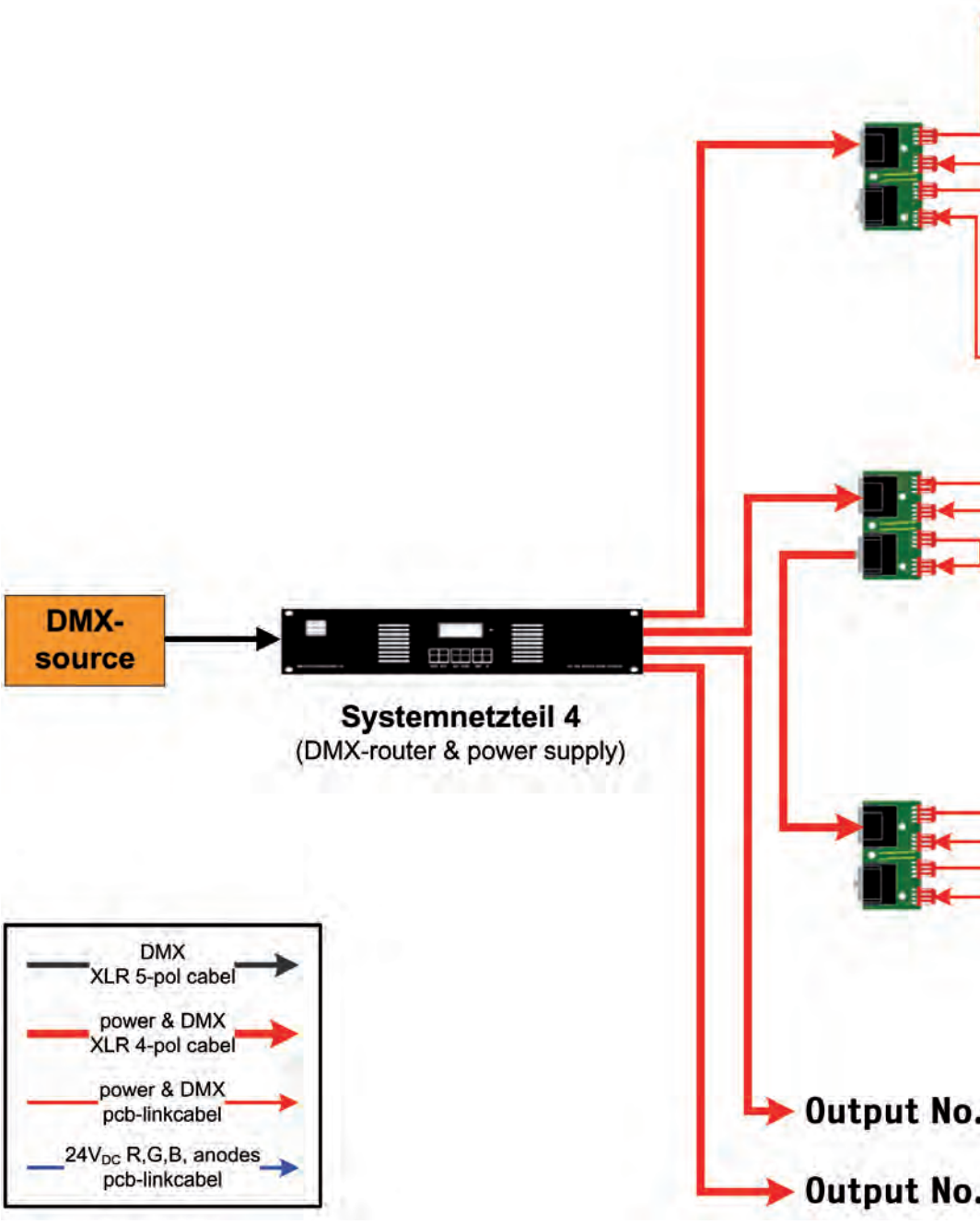
20 Kachel B or 6 Intelligenzes with 6 Streifen B25-250 each (36 Streifen total) or 20 Streifen B25-250 I (with Intelligenzes)
max. 20 Intelligenzes
max. current 6 A
max. 60 DMX adresses
max. 20 m XLR 4pin cable to the Adapterplatine

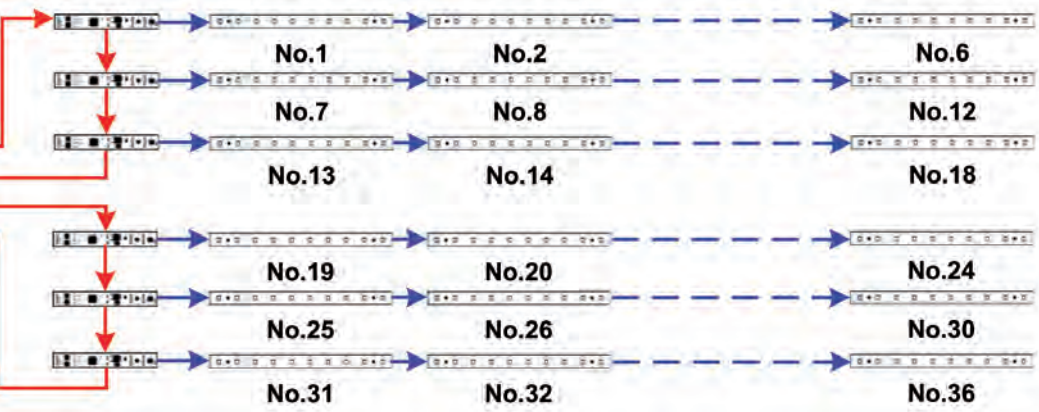
Per output of the Adapterplatine:

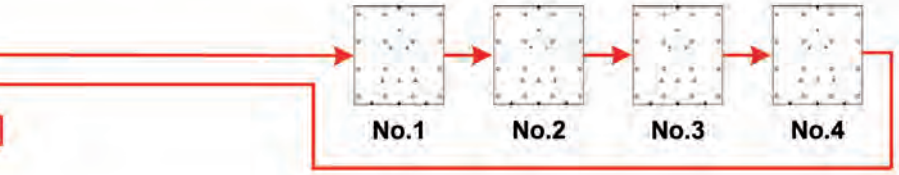
10 Kachel B or 16 Streifen B25-250 or 8 Streifen B12-250
max. current 3 A
max. 16 Intelligenzes
max. 6m pcb-cable wiring from the Adapterplatine output to the loop input

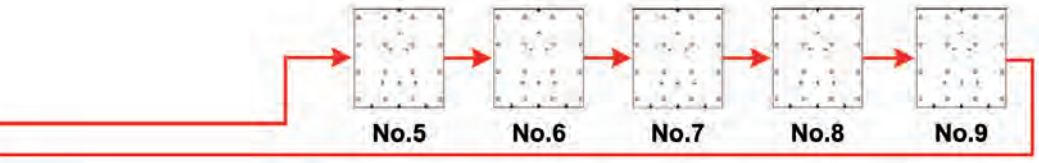
4.1 System Wiring Schemes

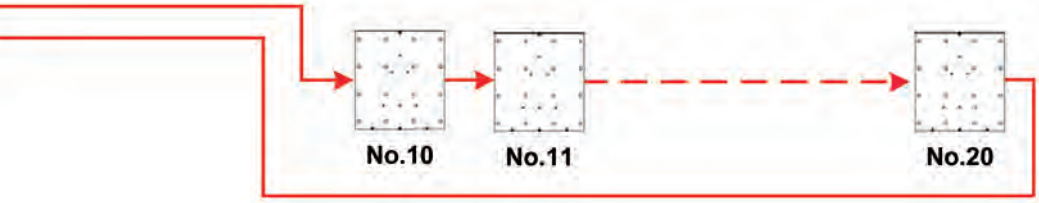
The following wiring schemes give an overview on different wiring variants.







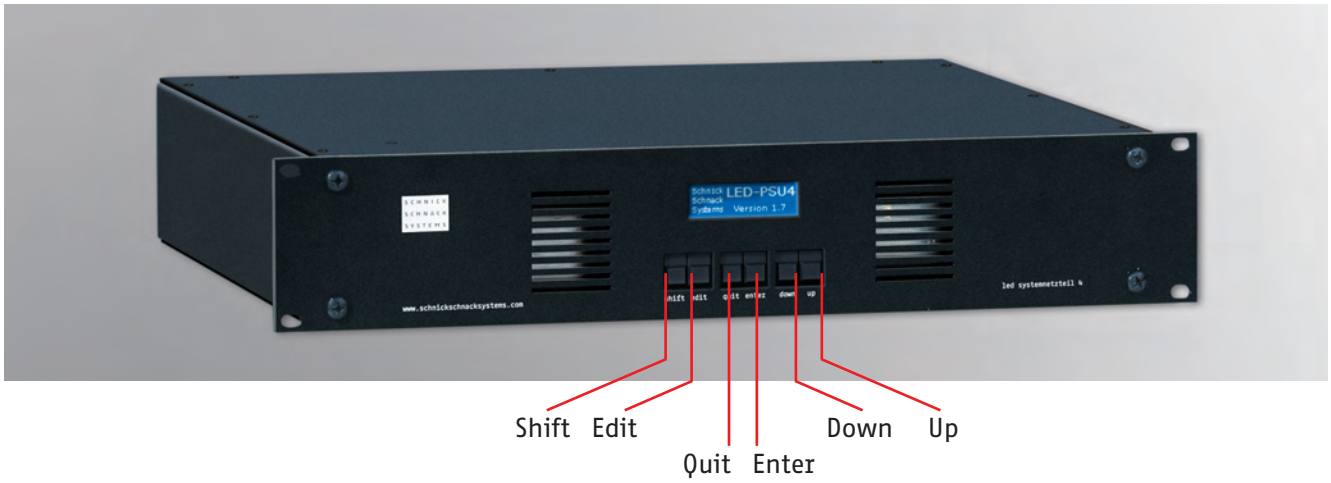




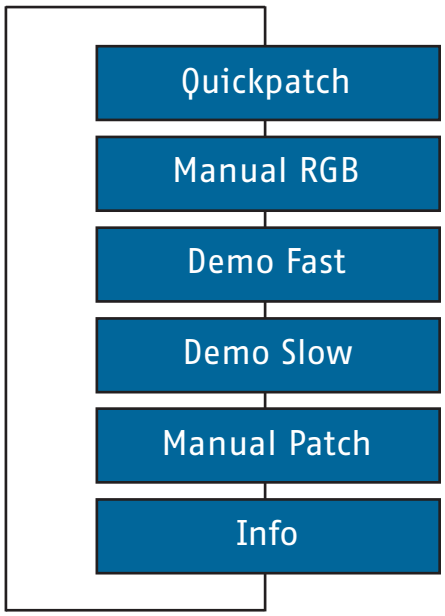
.3 also with max. 6A and 60 channels of DMX

.4 also with max. 6A and 60 channels of DMX

5.0 Menu Structure



5.1 Menu Sequence



5.2 Menu Selection

To go to the menu selection press the button QUIT and confirm the Question „Change Mode“ with ENTER. The buttons UP and DOWN select the desired mode – confirm selection with ENTER or press the QUIT button to go back to the recent running mode.

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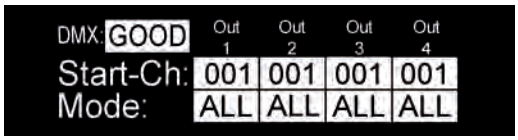
5.2.1 Quickpatch



There are two setup entries for each output.
Every column represents one output. The upper input field (labeled „Start-Ch:“) shows the DMX starting adress of the output. The lower field („Mode:“) is used to select patterns of channel combination and repetitions. The active input field is indicated by an inverted display of the content. To change to the next input field keep pressing the EDIT button until the display is inverted. The UP and DOWN buttons change the contents of the active input field.
On the top left corner of the display you can find information on the recieved DMX signal. „NONE“ shows that no valid DMX signal is recognized. „GOOD“ shows reception of DMX-packets without errors.

The following table shows the combination modes:

Table of combination modes

ALL - all connected RGB LED fixtures work on 3 channels of DMX with the red LED starting on the selected start channel.

Combine

C 2	-	Combine 2	- 2 LED fixtures are buddied together
C 3	-	Combine 3	- 3 LED fixtures are buddied together
C 4	-	Combine 4	- 4 LED fixtures are buddied together
C 5	-	Combine 5	- 5 LED fixtures are buddied together
C 6	-	Combine 6	- 6 LED fixtures are buddied together
C 7	-	Combine 7	- 7LED fixtures are buddied together
C 8	-	Combine 8	- 8 LED fixtures are buddied together
C 9	-	Combine 9	- 9 LED fixtures are buddied together
C 10	-	Combine 10	- 10 LED fixtures are buddied together

Repeat

R2	- Repeat 2	- every second fixture has the same adress
R3	- Repeat 3	- every third fixture has the same adress
R4	- Repeat 4	- every fourth fixture has the same adress
R5	- Repeat 5	- every fifth fixture has the same adress
R6	- Repeat 6	- every sixth fixture has the same adress
R7	- Repeat 7	- every seventh fixture has the same adress
R8	- Repeat 8	- every eighth fixture has the same adress
R9	- Repeat 9	- every ninth fixture has the same adress
R10	- Repeat 10	- every tenth fixture has the same adress

OFF – No combination – all fixtures on seperatly controlled adresses.

5.2.2 Manual RGB

This menu function is used to output a defined colour on all fixtures on all outputs. It can be used as a standalone solution if no DMX-signal is present.

With EDIT you can choose the active input field, with UP and DOWN you edit the content. Simply set the intensity value for each colour from 0 to 255 to mix the desired colour output.

5.2.3 Demo Fast/Slow

This mode runs a continious colour run on all connected LED fixtures. As the names suggest the only difference between both modes is the running speed. This mode is often used for system testing during setup.

5.2.4 Manual Patch

If you press SHIFT + ENTER you can copy the contents of the Quickpatch into the maunal patch.
Be aware that this command cannot not be undone and a previously setup Manualpatch will be overwritten. If you press QUIT the Manualpatch is not overwritten.

Setup-Options in Manual-Patch:

Input field Output: number of the LED output on the Systemnetzteil 4 Input field Channel: the channel on the selected output (1-60) channel 1 is the the red channel of the first connected LED fixture.

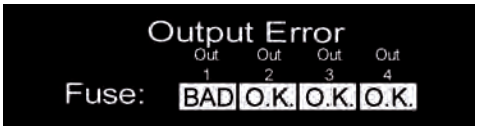
Input field Type: select INT to output a constant value on this channel. Select DMX to set a DMX input channel to this channel. Input field Value: Either the value of the constant intensity or the DMX input channel according to Type setting.

5.2.5 Info

The menu function „Info“ shows information on the unit type and the version of the software on the display.

5.2.6 Error Message

If one of the outputs´ fuses fails the display backlight will start flashing and you will see the following display:



6.0 Contact

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7.0 Technical Data

Housing:	19“, 2 Height Units (2 HU) 483mm x 88mm x 430mm (WxHxL)
Operating Voltage:	100-240 V AC , 50/60 Hz
Power consumption:	700 VA
Output current:	max. 6 A per output
Mains connector:	Neutrik Powercon
DMX in:	Neutrik XLR 5 pin
DMX out:	Neutrik XLR 5 pin
Protocol:	DMX 512A-1990 USITT, isolated and protected
LED outputs 1-4:	Neutrik XLR 4 pin
Weight:	7,7 kg

7.1 Connector Wiring

DMX:

1	2	3	4	5	Housing
Data GND	Data-	Data+	N/C	N/C	N/C

XLR-4-Pol-Ausgang:

1	2	3	4	Housing
GND	Data-	Data+	+24 Volt	N/C

8.0 Declaration of Conformity

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I hereby declare that the product

LED-Beleuchtungssystem bestehend aus „LED-Systemnetzteil 4“, „LED-Kachel B“, „LED Streifen 25“ mit „Intelligenz“ und Verkabelung nach Bedienungsanleitung.

(Name of product, type or model, batch or serial number)

meets the essential requirements referred to in Article 3 of the Council Directive 99/5/EC.

The following harmonized standards have been applied:

EN 60950-1:2003

EN 55015:2000

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Koeln, 7th. February 2005

(Place, Date of issue)

(Signature)

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